

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 September 2000 (21.09.2000)

PCT

(10) International Publication Number  
WO 00/55363 A3

- (51) International Patent Classification<sup>7</sup>: C12Q 1/68
- (21) International Application Number: PCT/GB00/00807
- (22) International Filing Date: 9 March 2000 (09.03.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
9905807.5 12 March 1999 (12.03.1999) GB
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- (81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— *With international search report.*
- (88) Date of publication of the international search report:  
21 December 2000
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

WO 00/55363 A3

(54) Title: ANALYSIS OF DIFFERENTIAL GENE EXPRESSION

(57) Abstract: The invention provides methods for detecting the differential expression or presence of two analytes, and more specifically to procedures which provide for rapid and efficient analysis of gene expression in biological systems. In particular, the invention provides a method of detecting and analysing differences between nucleic acids from two sources, which method comprises: a. providing nucleic acids from two sources as labelled probes; b. forming a mixture of the labelled probes with pooled reagents wherein each reagent is a population of beads carrying a polynucleotide target, the target of one reagent being different from the target of another reagent, the beads of one reagent being distinguishable from the beads of another reagent; c. incubating the mixture under conditions to promote specific hybridisation between probes and targets; and, d. analysing beads in the mixture by flow cytometry.